Duck Valley 2 June 1999
Rick Bauer - R9 laboratory

- The contractor is not doing a good job with shipping the samples. See Rick's 2 June e-mail detailing the numerous problems. All samples which came in were for characterization so the information is still valuable but not defensible data for litigation.

(A) Talk to BIA regarding data quality of samples that have been received.
(A) Talk to Secor regarding transport of future samples

- Basic problems : Packaging, temperature, and timing
  - Packaging ↓ Broken bottles
  - temperature ↓ 4°C
  - timing ↓ hold time

3 June Conf Call : BIA, Tribe, Contractors, EPA
- Secor will (1) package fewer samples per cooler. (2) And will look into alternative shipping arrangements. Jeff will get back to me with this information via e-mail on 3 June.

- BIA (John Krause) will be at Duck Valley 7 June. Will patch me in via conference call at 12:00 PST.

- Cancel 3 June call.

- The remainder of the week, excavation of PSC will be done. Geoprobe of area N of ~~road~~ road shop done. Will start on discharge line (injection well) next week. Still need BIA to remove asbestos before Secor can enter road shop.
- Projected to finish end of next week.

Jon Krause
602-379-3833

Richard Bauer
06/02/99 08:51 AM

To: Alisa Wong/R9/USEPA/US@EPA
cc: Laura Bose/R9/USEPA/US@EPA, Gail Jones/R9/USEPA/US@EPA, NancyJ Wilson/R9/USEPA/US@EPA, David Taylor/R9/USEPA/US@EPA, Brenda Bettencourt/R9/USEPA/US@EPA, Ken Hendrix/R9/USEPA/US@EPA, jcollins@secor.com
Subject: Duck Valley Samples - Data Quality Issues

We received 78 samples from the Duck Valley project last week (30 soil, 48 water). Some issues were brought to my attention regarding sample handling, preservation by the samplers, and sample prep here at the lab. These issues may affect data quality, and may or may not (depending on project objectives) make the analytical results inadequate for their intended use. I'm writing to inform you of these issues so that we may know how to proceed.

1) Sample temperatures upon receipt were above the recommended 2 - 6 degree C for all but one shipment of seven soil samples. All other sample were between 10 -14 degrees C upon receipt. Samples were packed in large coolers with three or four small blue ice packages, which had melted by the time they arrived at the lab. Some coolers were obviously several days in transit.

2) Many samples arrived on the fifth or sixth day after sample collection. The holding time for extraction of water samples for TPH-deisel and for semi-volatile organics analysis is seven days. Forty-five water samples were designated for TPH-deisel analysis and twenty-one water samples for semi-volatile organics. Including lab blanks and lab QC this comes out to over seventy sample extractions that needed to be performed in one or two days. **Extraction hold time was missed for four samples for TPH-deisel**. No extraction hold times were missed for semi-volatile organic analysis. However, any re-extractions that may be necessary will be done past hold time (hopefully we will not need to do any).

3) Sample containers were poorly packaged and quite a few sample bottles broke in transit. Some of these broken samples were highly contaminated with fuel hydrocarbons (strong fuel odor and visible fuel residue in the cooler). The samplers were notified immediately and attempted to package the last sample shipment better (with bubble wrap rather than just pieces of cardboard between the bottles), but a couple of broken bottles were still received in this last shipment. In all about 11 or 12 broken bottles were received. Duplicate bottles were received for all the broken bottles, so analysis for these sample locations is proceeding. Although the other sample containers in the coolers were tightly capped there is increased possibility of cross contamination due to the broken samples.

4) Soil samples designated for TPG-gasoline were received in glass sediment jars. Portions of these samples were preserved/extracted with methanol as quickly as possible at the lab, but many were received 5 or 6 days after sample collection, and at 10 - 14 degrees C. Significant loss of volatile fuel hydrocarbons is possible.

Other issues which may or may not affect data quality or defensibility: a) no custody seals were used on the coolers or samples; b) thick layers of sediment are present in all of the groundwater samples. Samples for metals were not filtered prior to preservation. I don't know if this makes a difference or not with regard to how the data are to be used and what the planned procedures were; c) on the chain-of-custody documents the samplers request both method 8270 and CLP SVOA and have sent bottles for both. These are essentially the same analysis. We are performing method 8270 only.

At this point we are proceeding with all analyses. Please let me know as soon as possible if you have any different instructions for us.